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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23342	7590	11/01/2006	EXAMINER	
KILPATRICK STOCKTON LLP 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			RUTTEN, JAMES D	
			ART UNIT	PAPER NUMBER
			2192	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,613

Applicant(s)

SZEPESVARY ET AL.

Examiner

J. Derek Rutten

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

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DETAILED ACTION

1. This action is in response to Applicant's submission filed 7/31/06, responding to the 3/31/06 Office action which detailed the rejection of claims 1-13 and 16-25. Claims 1 and 19 have been amended. Claims 1-13 and 16-25 remain pending in the application and have been fully considered by the examiner.

2. In the response filed 7/31/06, Applicant's essentially argue that the prior art of record, Jennings, does not disclose an application-specific grammar. This argument is not convincing for the reasons provided in the *Response to Arguments* section below.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Response to Arguments

4. On page 6 of the amendment filed 7/31/06, in response to the rejection of claims 1-13 and 16-25 under 35 U.S.C. § 101, applicant states:

Also, Applicants note that the Court of Appeals for the Federal Circuit has **stated explicitly that software is patentable**. *AT&T Corp. V. Excel Communications, Inc.* 172 F.3d 1352, 1357 (C.A.Fed. 1999). In discussing the *Diehr* decision, the court stated, "the argument for the opposite result, that 'the term 'algorithm' ... is synonymous with the term 'computer program'," and thus computer-based programs as a general proposition should not be patentable, was made forcefully in dissent by Justice Stevens; his view, however, was rejected by the *Diehr* majority." *Id.* (citations omitted). [emphasis added]

This argument is not persuasive. An explicit statement that "software is patentable" was not found. Rather, the CAFC quoted the *Diehr* Court as follows:

Thus, even though a mathematical algorithm is not patentable in isolation, a process that applies an equation to a **new and useful end** "is at the very least not barred at the threshold by Section 101." [emphasis added]

The CAFC further responded:

Rather, it is now clear that computer-based programming constitutes patentable subject matter **so long as the basic requirements of Section 101 are met**. [emphasis added]

...
His second concern, that the ambiguous concept of "algorithm" could be used to make any process unpatentable, can be laid to rest once the focus is understood to be not on whether there is a mathematical algorithm at work, but on whether the algorithm-containing invention, as a whole, produces a **tangible, useful, result**. [emphasis added]

Thus, the CAFC is concerned that computer-based programming should produce "a tangible, useful, result."

Claim 1 is directed to a "method for identifying user interface (UI) objects... comprising ... generating a ... parser computer program for ... parsing the tokens ... to identify one or more UI objects". However, the method does not establish a concrete result in connection with the parser in order to provide such a "tangible, useful, result", since the parser is described simply as being "for" identifying UI objects. A positive identification of UI objects does not occur, and

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thus there is no concrete result. A process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In re Swartz, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is “irreproducible” claim should be rejected under section 101). See MPEP 2106(IV)(C)(2(2(c))) “Concrete Result” (Rev. 5, Aug. 2006, page 2100-12). However, if the parser computer program was being claimed in terms of a positive execution on a computer system, it could be established as a concrete part of the method, instead of merely being “for” parsing that is not concretely claimed.

Claim 19 is directed to a “digital data processing system ... comprising: a parser computer program generator...” However, a program generator is interpreted as being a software component and is not claimed in positive terms as being used in connection with hardware elements that would enable the program generator to become useful. The claim merely describes the parser as being “*for* execution” on the system, but does not establish the program generator as being a definitive part of a tangible system. Rather, the system is claimed as merely comprising a parser generator. Thus, the system is interpreted as being purely software, per se. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is

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a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Further, see MPEP 2106.01(I) (Rev. 5, Aug. 2006, page 2100-18).

5. At the bottom of page 7, filed 7/31/06, Applicant essentially argues that Jennings does not describe the use of a predefined application-specific grammar. This argument is not persuasive. Jennings discloses parsing description documents that define interfaces for applications. See column 2 lines 53-57: "Preferably, a plurality of description documents, defining a plurality of different user interfaces – be they **different interfaces to the same application or interfaces to different applications** – is stored. These are then used to generate the object models for the different interfaces." [emphasis added] Thus, Jennings discloses using application-specific grammars in the generation of the object model. It is noted that Jennings is not relied upon for the disclosure of parser generation.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-13 and 16-25 are rejected under 35 U.S.C. 101 because the claimed invention lacks concreteness and clarity. Claim 1 is directed to a method to identifying user interface

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objects; however, the claim never actually identifies a UI since the “parser computer program” is merely “~~configured~~ for” identification, and never actually performs any scanning, token generation, parsing, or UI identification. Such a claim should positively recite the acts of scanning, token generation, parsing, UI identification, etc., in order to be considered statutory. Claims 2-13 and 16-18 are dependent upon claim 1 but do not make up for the deficiencies of the parent claim and are likewise rejected. Claim 1 is representative of the limitations found in claim 19, which is likewise rejected. Claims 20-25 are dependent upon claim 19 but do not make up for the deficiencies of the parent claim and are likewise rejected.

8. Claims 19-25 are rejected under 35 U.S.C. 101 because the claimed invention is not tangible. Claim 19 is drawn to a system for identifying user interface objects. However, none of the claimed limitations *necessarily* describe any type of hardware system, and are thus interpreted as representing a purely abstract software system, per se. Since software is simply an abstraction of a system, it is not tangible. However, if such a system were claimed as including elements that are *necessarily* implemented in a system requiring hardware, then it would be statutory. Claims 20-25 are dependent upon claim 19 but do not make up for the deficiencies of the parent claim and are likewise rejected.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-13 and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings, US Patent No. 6,717,593 in view of "Compilers: Principles, Techniques, and Tools" by Aho et al. (hereinafter "Aho").

As per claim 1, Jennings teaches that the interactor parses the description documents of an interface into elements and reflects them in the object model to form an instance representing the interface, downloads the objects corresponding to the reflected elements registers their interfaces in the object model instance to make them accessible by the elements, and invokes execution of each downloaded object with the corresponding element to render the element. (E.g. see Abstract and associated text). Jennings discloses the method covering the steps of a method for identifying user interface (UI) objects in a markup-language stream, the method comprising the steps of:

receiving a predefined application-specific grammar; See column 8 lines 53-58 for a discussion of an XML parser which parses a document into XML elements. Note that a predefined grammar is inherent in such parsing, otherwise the parser would not know be able to recognize an XML element. Jennings also describes application-specific grammars. See column 2 lines 53-57.

...a parser computer program based on the predefined application-specific grammar... E.g. see FIG. 7 step 401 and associated text, e.g. col. 7:35-65.

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the parser computer program for:

scanning any of (i) the markup-language stream and (ii) a corresponding document object model (DOM) to generate tokens; E.g. see FIG. 16 and associated text, e.g. see col. 7:35-52.

parsing the tokens with the parser computer program to identify one or more UI objects E.g. see col. 7:42-44.

Jennings does not expressly disclose *automatically generating* a parser computer program based on the predefined grammar using an automated-parser generator tool.

However, in an analogous environment, Aho teaches the well known method of using a parser generator tool to automatically generate a parser based on a predefined grammar.

See Section 4.9, especially Fig. 4.55:

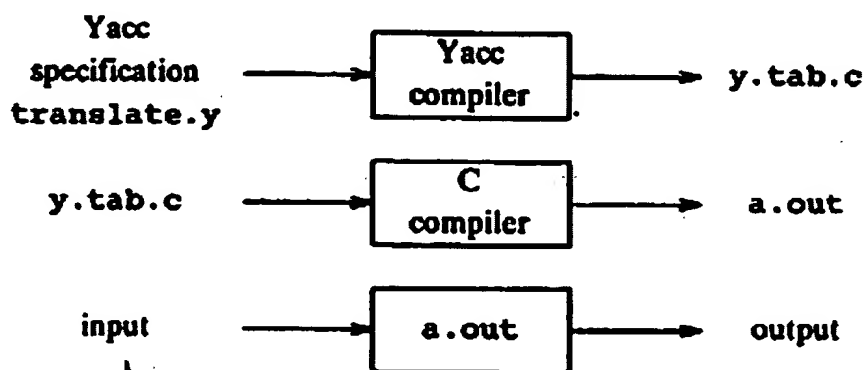


Fig. 4.55. Creating an input/output translator with Yacc.

Note that the grammar is represented as the “Yacc specification” and the parser is represented as “a.out”. It is also noted that Applicant’s originally filed specification also describes this “well known parser generator” in paragraph 2 on page 10. It would have

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been obvious to one of ordinary skill in the art at the time the invention was made to use Aho's teaching of a parser generator with Jennings parser. One of ordinary skill would have been motivated to use a well known tool to facilitate the construction of a parser in order to determine if source code is syntactically well formed (See Aho page 159, bullet two, and the 1st paragraph in section 4.9 on page 257).

As Per claim 2, the rejection of claim 1 is incorporated and further Jennings teaches:

"wherein said markup-language stream drives a markup-language-based browser application, and wherein the scanning step includes scanning the DOM generated by a browser that displays that application." (E.g. see col. 7:35-52).

As Per claim 3, the rejection of claim 1 is incorporated and further Jennings teaches: "wherein the scanning step includes identifying elements of the DOM by traversal thereof." (E.g. see FIG. 16 and associated text, e.g. see col. 7:53-57).

As Per claim 4, the rejection of claim 3 is incorporated and further Jennings teaches: "wherein the grammar is application-specific." (E.g. see col. 7:53-65).

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As Per claim 5, the rejection of claim 3 is incorporated and further Jennings teaches: “wherein the scanning step includes generating one or more tokens for each parsed DOM element.” (E.g. see col. 7: 7:42-45).

As Per claim 6, the rejection of claim 3 is incorporated and further Jennings teaches: “wherein scanning step includes mapping DOM elements to tokens.” (E.g. see col. 7:35-52).

As Per claim 7, the rejection of claim 1 is incorporated and further Jennings teaches: “wherein the parser parses the tokens according to the grammar to identify and distinguish among UI objects in the markup-language stream.” (E.g. see col. 7:53-65).

As Per claim 8, the rejection of claim 7 is incorporated and further Jennings teaches: “wherein said UI objects comprise user input fields (E.g. see col. 7:31-32, text entry and see FIG. 15, block “Password” and associated text), text fields (E.g. see col. 7:31-32, text entry and see FIG. 15, block “Text” and associated text), metatags (E.g. see FIG. 4 and associated text, e.g. see col. 5:47-50, and col. 7:45-50), unprintable markup-language (E.g. see FIG. 15, block “Hidden” and associated text), and in-line images (E.g. col. 7:35-40 and see FIG. 15, block “Image” and associated text).”

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As Per claim 9, the rejection of claim 1 is incorporated and further Jennings teaches: “wherein the scanning and parsing steps are adapted to identify UI objects that correspond to elements displayed in the markup-language application.” (E.g. see FIG. 16 and associated text, e.g. see col. 7:35-52).

As Per claim 10, the rejection of claim 9 is incorporated and further Jennings teaches: “wherein said parser groups the tokens into syntactic structures that identify items displayed by the markup-language application.” (E.g. see col. 7:20-25).

As Per claim 11, the rejection of claim 9 is incorporated and further Jennings teaches: “wherein said step of scanning can include identifying similarly formatted markup-language elements based on their markup-language attributes such as classname, font size, style, tag color, and size.” (E.g. see col. 5:17-29, style sheet).

As Per claim 12, the rejection of claim 9 is incorporated and further Jennings teaches: “wherein said objects comprise name (E.g. see col. 6:1-3), content (E.g. see col. 6:1-3, value), shape (E.g. see col. 5:64), location (E.g. see col. 6:3-5), and properties (E.g. see FIG. 4 and associated text).”

In regard to claim 13, the above rejection of claim 1 is incorporated. All further limitations have been addressed in the above rejection of claim 1.

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In regard to claim 16, the above rejection of claim 1 is incorporated. Jennings does not expressly disclose a LALR(1) parser. However, Aho teaches that Yacc is a LALR parser. See paragraph 1 in section 4.9 on page 257.

In regard to claim 17, the above rejection of claim 1 is incorporated. Jennings does not expressly disclose a LR(1) parser. However, Aho teaches that Yacc is a LR parser. See paragraph 1 on page 216.

As Per claim 18, the rejection of claim 1 is incorporated and further Jennings teaches: "wherein the markup language is any of HTML," (E.g. see col. 7:16-20).

As Per Claim 19, Jennings discloses a digital data processing system (see FIG. 1). All further limitations have been addressed in the above rejection of claim 1.

As Per claim 20, the rejection of claim 19 is incorporated and further Jennings teaches: "wherein the list of UI objects corresponds to elements displayed by the markup-language DOM." (E.g. see FIG. 16 and associated text, e.g. see col. 7:53-65).

As Per claim 21, the rejection of claim 20 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 12.

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As Per claim 22, the rejection of claim 19 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 4.

As Per claim 23, the rejection of claim 19 is incorporated and further Jennings teaches:

“wherein said tokens are interpreted according to the grammar to identify and distinguish among UI objects of a markup-language application's display.” (E.g. see FIG. 16 and associated text, e.g. see col. 7:35-65).

As Per claim 24, the rejection of claim 19 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 8.

As Per claim 25, the rejection of claim 19 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 18.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571)272-3703. The examiner can normally be reached on T-F 6:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TUAN DAM
SUPERVISORY PATENT EXAMINER

jdr